

# Fact Sheet



## For Final Minor Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

This Fact Sheet serves to address the changes specific to this Minor Modification, and shall be considered a supplement to the Fact Sheet corresponding with the Title V operating permit issued on January 23, 2007.

Permit Number: **R30-03900075-2007 (MM01)**

Application Received: **January 28, 2011**

Plant Identification Number: **03-54-03900075**

Permittee: **Cranberry Pipeline Corporation**

Facility Name: **Horsemill Compressor Station**

Mailing Address: **Five Penn Center West, Suite 401, Pittsburgh, PA 15276**

Permit Action Number: *MM01*      Revised: *July 11, 2011*

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Physical Location:	Cedar Grove, Kanawha County, West Virginia
UTM Coordinates:	461.61 km Easting • 4,232.07 km Northing • Zone 17
Directions:	Traveling south on US-60 bear left onto CR-8/1 (Kellys Creek) for approximately 0.1 miles. Turn left on Horsemill Hollow Road for approximately 1.3 miles.

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### Facility Description

Horsemill Compressor Station is a natural gas gathering facility covered by Standard Industrial Classification (SIC) Code 1389. The station has the potential to operate twenty-four (24) hours per day, seven (7) days per week, fifty-two (52) weeks per year. The station consists of one (1) 600 HP natural gas compressor engine, one (1) 800 HP natural gas compressor engine, a glycol dehydration unit and 4 tanks of various sizes.

This permit application seeks to increase the emission limits, pertaining to the glycol dehydration unit. This permit application seeks increase of emissions to benzene, xylenes, and total Hazardous Air Pollutants as a result of a new extended gas analysis.

This modification also incorporates construction permit R13-2808A issued on April 11, 2011.

### Emissions Summary

The following table outlines the changes in potential emissions (tons per year) based upon prior permit modifications, as well as this modification (i.e., MM01). According to Attachment S of the application, the facility's potential emissions will change by the quantities given in the "ΔMM01" column. All other data was obtained from the Fact Sheet from the previous permitting action.

Pollutant	PTE prior to MM01 (TPY)	ΔMM01 (TPY)	PTE Proposed MM01 (TPY)
Benzene	0.40	+0.32	0.72
Xylene	0.15	+0.06	0.21
Total HAPs	5.15	+0.38	5.53

### Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit 202.71 tons per year of Nitrogen Oxides. Due to this facility's potential to emit over 100 tons per year of a criteria pollutant, Cranberry Pipeline Corporation is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

### Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR13	
	45CSR30	Operating permit requirement.
	40 CFR 63 Subpart HH	NESHAP: Oil & Natural Gas Production Facilities.
State Only:	45CSR42	Greenhouse Gas Emissions Inventory Program

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

## Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit ( <i>if any</i> )
R13-2808A	4/11/11	N/A

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B" which may be downloaded from DAQ's website.

## Determinations and Justifications

The following are the changes made in this minor modification:

1. Section 1.2 of the permit – Permit number and issuance date have been changed due to issuance of R13-2808A on April 11, 2011

**Boilerplate changes:** The following changes have been made due to boilerplate changes:

2. Section 2.1.4 has been added to define "rolling yearly total".
3. Section 3.1.1 has been changed to reflect new 45CSR§6-3.1 language.
4. Section 3.1.2 has been changed to reflect new 45CSR§6-3.2 language
5. Section 3.1.3 regarding asbestos and the citation of the section have been changed due to change in boilerplate.
6. Sections 3.1.10 and 3.5.11 have been added due to new rule 45CSR42 for greenhouse gas emissions.
7. Paragraph d has been added to section 3.3.1 to reflect boilerplate change requiring reporting of stack test results.

### Other Changes:

8. Section 5.1.2 has been changed to reflect new R13-2808A, section 5.1.2 limits.
9. Old section 5.2.1 is deleted because new 45CSR13 permit R13-2808A eliminated the requirement.
10. Old section 5.2.2 is renumbered to section 5.2.1, and its language is replaced by incorporating requirement 5.2.1 from R13-2808A. In the second paragraph the following phrase has been added to R13-2808A language to clarify how wet gas composition shall be measured: "which shall be measured in accordance with 5.3.1".
11. Section 5.3.1 has been changed to reflect new R13-2808A, section 5.3.1 language.
12. Section 5.3.2 has been eliminated because section 5.3.2 was eliminated in R13-2808A.
13. Section 5.4.1 has been changed to reflect new R13-2808A, section 5.4.1 language.
14. Section 5.4.2 has been changed to reflect new R13-2808A, section 5.4.2 language. In the first paragraph the phrase "compliance determinations in accordance with Section 5.3" in R13-2808A, section 5.4.2 language has been changed to "compliance determinations in accordance with Sections 5.2.1 and 5.3.1" to clarify how wet gas analysis and flow rate measurements shall be performed.
15. Section 5.4.3 has been changed to reflect new R13-2808A, section 5.4.3 language. In the last sentence of R13-2808A, section 5.4.3 language, the phrase "input parameters required by section 5.2.2" has been changed to "input parameters required by section 5.2.1" to rectify the mistake in R13 language – section 5.2.2 does not exist in R13-2808A.
16. Section 5.4.4 has been added to reflect new R13-2808A, section 5.4.4 language.
17. Old section 5.5.1 is deleted because new 45CSR13 permit R13-2808A eliminated the requirement.
18. Old section 5.5.2 is renumbered to section 5.5.1 stating requirement 5.5.1 from R13-2808A. The phrase "compliance determinations conducted as required in Section 5.3" in R13-2808A, section 5.5.1 language has been changed to "compliance determinations conducted as required in Sections 5.2.1 and 5.3.1" to clarify how compliance determination shall be performed.

19. Section 5.5.2 has been added to require reporting of the results of an emission summary from dehydration unit RSV-1.
20. A note has been added to 6.1.2 stating that compliance with monitoring and testing requirement for section 6.1.2 shall be streamlined by demonstrating compliance with the monitoring specified within section 5.2.1 of the permit and the testing provision of 5.3.1 of the permit.

The Federal Regulations for Natural Gas Production under 40 C.F.R. 63 have been found to be somewhat open for interpretation when it comes to using the GLYCalc simulation software to estimate emissions and therefore demonstrate compliance with emission standards or exemption thresholds. The GACT requirements under 63.772 (Section 6.1.2 of the permit) as well as 63.774 (Section 6.1.6 of the permit) are open for interpretation since, they establish monitoring, recordkeeping and reporting that is vague due to the language stating that actual operating parameters shall be measured in accordance with the methods and procedures presented within the GLYCalc Technical Reference Manual. As a result, the language added by the Rule 13 permit as well as under Title V authority establishes monitoring and testing frequencies based on the compliance margin exhibited by each facility. Therefore, the resulting language of 5.2.1 and 5.3.1 takes each of the relevant operating parameters associated with the dehydration column and establishes a specific monitoring and testing frequency. This operating data is monitored in accordance with these provisions and shall form the basis of the GLYCalc emission simulation model. Since, this emission estimate forms the basis for compliance with the 1 ton per year of benzene threshold, all records of the modeling run and documentation of all monitoring inputs to the GLYCalc shall be kept in accordance with Sections 6.1.6, 6.1.2, 5.4.1, 5.4.3 and 5.4.4 of the permit.

Therefore, since the minor source NSR and Title V permits have incorporated monitoring and testing language that is in accordance with the federal standard, but more specific when it comes to defining minimum testing and monitoring frequencies, the writer views the requirements of 5.2.1 and 5.3.1 as adequate to streamline compliance with the more general GACT requirements within Sections 6.1.2 and 6.1.6 of the permit.

As a result, the permittee is not guaranteed to be in compliance with the emission limits or thresholds defined within the permit, but if records are kept in accordance with the monitoring and testing provisions of 5.2.1 and 5.3.1, the source will have established a defensible means of supporting their emission estimate as required by 40 C.F.R. 63, subpart HH (Section 6.1.2 of the permit).

21. 40 C.F.R. Part 63 Subpart HH – *National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities.*

Applicability and designation of affected source

First, it should be noted that the applicability of this MACT is not limited only to major sources of HAPs; area sources may also be subject. The rule applies to an owner or operator of emission points listed under §63.760(b) located at facilities that meet the applicability criteria §§63.760(a)(1) and either (a)(2) or (a)(3) of that section.

Criterion §63.760(a)(1) applies to, “*Facilities that are major or area sources of hazardous air pollutants (HAP) as defined in §63.761.*” The facility is not a major source of HAPs; therefore, it is an area source in accordance with the definition of *area source* under §63.2. The facility meets the first criterion.

Criterion §63.760(a)(2) applies to, “*Facilities that process, upgrade, or store hydrocarbon liquids prior to the point of custody transfer.*” The facility does not process *hydrocarbon liquids* as defined in §63.761; therefore, it does not meet this criterion.

Criterion §63.760(a)(3) applies to, “*Facilities that process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user. For the purposes of this subpart, natural gas enters the natural gas transmission and storage source category after the natural gas processing plant, when present. If no natural gas processing plant is present, natural gas enters the natural gas transmission and storage source category after the point of custody transfer.*” Clearly, this facility processes natural gas. Furthermore, it processes the natural gas prior to the point that the gas enters the transmission and storage source category.

Horsemill Compressor Station meets the facility applicability criteria §§63.760(a)(1) and (a)(3). The particular emission point that is subject to Subpart HH is covered by §63.760(b)(2), which “*includes each triethylene glycol (TEG) dehydration unit located at a facility that meets the criteria specified in paragraph (a) of this section.*” According to the Process Description (Attachment G) included with the application, “*The process to remove the moisture begins with the compressed gas being passed through a triethylene glycol dehydration system....*” Since the facility’s proposed dehydration unit is a triethylene glycol dehydration unit, it meets the applicability criterion set forth in §63.760(b)(2), and as such RSV-1 is subject to the applicable requirements of 40 C.F.R. 63 Subpart HH.

The facility is located in Urban-1 county as defined in §63.761. The measured distance of the facility is less than 2 mile from the 2000 Urban Area, the compressor station is located within a *UA plus offset and UC* area, as defined in §63.761.

The affected facility is an area source, located in an *Urban-1 county* as defined in §63.761. Based upon these criteria, and in accordance with §63.760(f)(4), the Subpart HH compliance date is “immediately upon initial start-up.” Refer to permit condition 6.1.3. The permit condition 6.1.3 has been added in accordance with §63.760.

#### General Standards

Permit condition 6.1.4 has been added to address §63.764 requirements.

Since the compressor station is located within a *UA plus offset and UC*, it appears that requirements of §63.764(d)(1) would apply to the dehydration unit. However, the dehydration unit meets the exemption criterion in §63.764(e)(1)(ii); therefore, the dehydration unit is not subject to §63.764(d). According to §63.764(e)(1), the permittee must maintain records of the determination of these criteria in accordance with §63.774(d)(1). Since the benzene emissions justify the exemption, §63.774(d)(1)(ii) is the applicable requirement to maintain records of actual average benzene emissions as determined in accordance with §63.772(b)(2) (see discussion below and condition 6.1.2.). Furthermore, there are specific methods under §63.772(b) that must be adhered to in order to verify the criteria for this exemption.

The facility meets the exemption criteria under §63.764(e)(1)(ii); therefore, records of actual average benzene emissions must be kept pursuant to §63.774(d)(1) [Section 6.1.6 has been added to permit in accordance with §63.764(d)(1)]. Refer to permit condition 6.1.4. The permit condition 6.1.4 has been added in accordance with §63.764.

Section 6.1.5 has been added to make the permittee aware that if benzene emissions from dehy exceed 1 tpy, the dehy will be subject to §63.764(d) (1) (i) through (iii) (in section 6.1.4 of the permit).

22. In section 6.1.2, 45CSR34 citation is deleted because 45CSR34 exempts area sources under 40 CFR 63 Subpart HH. 45CSR34 states: “Provisions under Subpart HH of 40 CFR Part 63 which apply to non-major area sources of hazardous air pollutants described in 40 CFR §63.760(b)(2) shall be excluded”.

### **Non-Applicability Determinations**

The following requirements have been determined not to be applicable to the subject facility due to the following:

N/A

### **Request for Variances or Alternatives**

None

### **Insignificant Activities**

Insignificant emission unit(s) and activities are identified in the Title V application.

### **Comment Period**

N/A

All written comments should be addressed to the following individual and office:

U.K.Bachhawat  
Title V Permit Writer  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

### **Procedure for Requesting Public Hearing**

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

### **Point of Contact**

U.K.Bachhawat  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: 304/926-0499 ext. 1256 • Fax: 304/926-0478

### **Response to Comments (Statement of Basis)**

Not applicable.